UNITED STATES PATENT OFFICE.

GEORGE EASTMAN, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE EASTMAN DRY PLATE AND FILM COMPANY, OF SAME PLACE.

CAMERA.

SPECIFICATION forming part of Letters Patent No. 408,596, dated August 6, 1889.

Application filed January 4, 1889. Serial No. 295,487. (No model.)

To all whom it may concern:

Be it known that I, GEORGE EASTMAN, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Cameras; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the figures and letters of reference marked thereon.

This invention relates more particularly to improvements in that class of photographic apparatus known as "detective cameras;" and it consists in the novel form of construction and arrangement of the camera-body, the lens support and adjusting device, and the exposing-shutter and operating devices, and in certain details and parts, all as will be hereinafter described, and set forth particularly in the claims at the end of the specification.

In the accompanying drawings, wherein I have illustrated one embodiment of my present improvements, Figure 1 is a view in perspective of the complete instrument; Fig. 2, a longitudinal sectional view of the same; Fig. 3, a detail section on the line *y y* of Fig. 2; Fig. 4, a perspective view of the shutter and the frame carrying it; Fig. 5, a view of the parts of the shutter separated; Figs. 6, 7, and 8, views of the shutter, showing the positions occupied by the parts in operation; Fig. 9, a sectional view on the line *y y* of Fig. 2; Fig. 10, a sectional view of the shutter and support.

Similar letters of reference in the several figures denote similar parts.

The letter A designates the camera box or case, preferably constructed in the form of a rectangular tube, at one end of which is secured an end piece B, having a perforation *b* therein. The rear end of the tube or case is adapted to be closed by a roller-holder for carrying sensitive photographic film, (substantially as shown in Letters Patent No. 388,850, granted me September 4, 1888,) secured to or formed integral with the rear cap plate or cover C′, and the sides of said holder upon which the operating devices are supported are formed to fit snugly within the tube A, the cover C′ overlapping or otherwise co-operating with the end of the box A to form a light-tight connection, so that when said roller-holder is inserted and held within the end of the box the sensitized film or plate will be entirely protected from light in rear and at the sides, and will only be exposed to light entering through the perforation *b* in the end piece and the lens inserted between this and said film.

As the specific construction of the roll-holder forms no part of my present invention except in so far as it is adapted to a camera of this class, its construction need not be specifically described. Suffice it to say it embodies a suitable measuring-roller C^2, a supply-roller C^3, a winding-roller C^4, with which a key C^5 is connected, so that the operator can by rotating this reel forward a new supply of film after making an exposure, the measuring-roll being also provided with a mark or indication on its end adapted to co operate with a mark in the thimble C^6, secured to the case, so as to indicate when the proper amount of film for a single exposure has been reeled forward over the film-support C^7. For a more full description of this roller-holder, which is but one of the many forms that could be devised, reference is made to the above-mentioned patent.

Between the end piece B and the roller-holder C is located a frame D, carrying the lens and shutter, preferably of rectangular tubular form to slide readily within the case from the rear and of sufficient length to have a bearing on the inside of the case and prevent tilting, and two of the sides D′ D′ of this frame are provided with slots *d d*, through which pass screws D^2, having milled heads, and entering corresponding nuts D^3, secured in the casing, suitable washers D^4 being interposed between said heads and the frame, as shown. These screws can be manipulated by suitable tools inserted from the rear, and upon being loosened the frame can be moved in or out to adjust the focus of the lens, and the screws then tightened before the cameras are sent out.

The front of frame D is of course provided with a perforation *d′* to permit the passage of light, and upon this frame is secured the lens and shutter holder E, as clearly shown in Fig. 4. This support E is con-